

# Recovery Plan Action Status

**Plan Name:** Recovery Plan for *Lipochaeta venosa* and *Isodendrion hosakae*

**Plan Status:** Final

**Plan Date:** 23-May-94

**Lead Agency:** USFWS

**Lead Office:** Pacific Islands Fish And Wildlife Office  
(808)  
792-9400 )

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Aupaka (Isodendrion hosakae), No common name (Lipochaeta venosa)	1	11	Secure and stabilize existing habitat: Secure habitat	Partially Complete	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, Parker Ranch	Acquisition: Management Agreement	Internal Administrative, Internal Field Assistance, Species Expert	DLNR and Parker Ranch have a cooperative agreement for management of all sites except #7, which occurs on DHHL lands. An attempt was made in 1995-96 to swap the DHHL site for another site of equal economic value from other state agencies so that this site could be protected, but no final decision as made and the issue was dropped in 1996.
Aupaka (Isodendrion hosakae), No common name (Lipochaeta venosa)	1	12	Confirm current status of species.	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources	Research: Population Surveys	Contract, Graduate Student, Internal Field Assistance, Species Expert	This task is ongoing, as the numbers of individuals and the degree and types of threats to the population change frequently.
Aupaka (Isodendrion hosakae), No common name (Lipochaeta venosa)	1	1311	Control ungulate damage at Site #1 - Nohonaohae	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, Parker Ranch	Management: Habitat Maintenance and Manipulation, Management: Predator and Competitor Control	Contract, Graduate Student, Internal Field Assistance, Volunteer	This site was fenced in 1991 and the fence has been maintained by DLNR.
Aupaka (Isodendrion hosakae), No common name (Lipochaeta venosa)	1	1312	Control ungulate damage at Site #2 - 1 mile east of Nohonaohae	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, Parker Ranch	Management: Habitat Maintenance and Manipulation, Management: Predator and Competitor Control	Contract, Graduate Student, Internal Field Assistance, Volunteer	

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No common name (Lipochaeta venosa)	1	1314	Control ungulate damage at Site #4 - Holokoloku	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, Parker Ranch	Management: Habitat Maintenance and Manipulation, Management: Predator and Competitor Control	Contract, Graduate Student, Internal Field Assistance, Volunteer	
No common name (Lipochaeta venosa)	1	1315	Control ungulate damage at Site #5 - Puu HeiHei	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, Parker Ranch	Management: Habitat Maintenance and Manipulation, Management: Predator and Competitor Control	Contract, Graduate Student, Internal Field Assistance, Volunteer	This site was fenced in 1989 and the fence has been maintained by DLNR. ES is not the lead for this action.
No common name (Lipochaeta venosa)	1	1316	Control ungulate damage at Site #6 - Puu Pa	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, Parker Ranch	Management: Habitat Maintenance and Manipulation, Management: Predator and Competitor Control	Contract, Graduate Student, Internal Field Assistance, Volunteer	
No common name (Lipochaeta venosa)	1	1317	Control ungulate damage at Site #7 - Puu Papapa	Ongoing Not Current	FY 2011		U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, Hawaiian Home Lands	Management: Habitat Maintenance and Manipulation, Management: Predator and Competitor Control	Contract, Graduate Student, Internal Field Assistance, Volunteer	Partners program has initiated contact with DHHL to potentially submit proposal for FWS funding in FY 2012.
Aupaka (Isodendron hosakae), No common name (Lipochaeta venosa)	1	132	Control feral ungulates outside of exclosures.	Not Started			Hawaii Department of Land and Natural Resources, Parker Ranch	Management: Habitat Maintenance and Manipulation, Management: Predator and Competitor Control	Contract, Internal Field Assistance, Volunteer	The removal of ungulates in a larger area around existing wild populations has not started, as they occur largely on private lands used for grazing cattle and the one other site occurs on Hawaiian Homes lands.
Aupaka (Isodendron hosakae), No common name (Lipochaeta venosa)	1	1411	Reduce fire conditions at Site #1	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, Parker Ranch	Management: Habitat Maintenance and Manipulation	Contract, Internal Field Assistance, Volunteer	This site was not protected from fire, and after a fire in 2002, only one individual was found.

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Aupaka (Isodendron hosakae), No common name (Lipochaeta venosa)	1	1412	Reduce fire conditions at Site #2	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, Parker Ranch	Management: Habitat Maintenance and Manipulation	Contract, Internal Field Assistance, Volunteer	
No common name (Lipochaeta venosa)	1	1414	Reduce fire conditions at Site #4	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, Parker Ranch	Management: Habitat Maintenance and Manipulation	Contract, Internal Field Assistance, Volunteer	
No common name (Lipochaeta venosa)	1	1415	Reduce fire conditions at Site #5	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, Parker Ranch	Management: Habitat Maintenance and Manipulation	Contract, Internal Field Assistance, Volunteer	
No common name (Lipochaeta venosa)	1	1416	Reduce fire conditions at Site #6	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, Parker Ranch	Management: Habitat Maintenance and Manipulation	Contract, Internal Field Assistance, Volunteer	
No common name (Lipochaeta venosa)	1	1417	Reduce fire conditions at Site #7	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, Hawaiian Home Lands	Management: Habitat Maintenance and Manipulation	Contract, Internal Field Assistance, Volunteer	
Aupaka (Isodendron hosakae), No common name (Lipochaeta venosa)	1	142	Develop fire response and suppression plans.	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, Hawaiian Home Lands, Parker Ranch	Management: Habitat Maintenance and Manipulation, Management: Planning	Contract, Graduate Student, Internal Technical Assistance	

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Aupaka (Isodendron hosakae), No common name (Lipochaeta venosa)	1	151	Carry out alien plant control	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources	Management: Habitat Maintenance and Manipulation, Management: Predator and Competitor Control	Contract, Graduate Student, Internal Field Assistance, Species Expert, Volunteer	
Aupaka (Isodendron hosakae), No common name (Lipochaeta venosa)	1	152	Restore native plant species	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources	Management: Habitat Maintenance and Manipulation	Contract, Graduate Student, Internal Field Assistance, Species Expert, Volunteer	
Aupaka (Isodendron hosakae), No common name (Lipochaeta venosa)	1	16	Establish/support a scientifically managed germ plasm reserve for both species	Ongoing Not Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, National Tropical Botanical Garden, Hawaii Department of Land and Natural Resources	Management: Propagation	Contract, Graduate Student, Internal Technical Assistance, Volunteer	There is very little material of either species in collections at this time.
Aupaka (Isodendron hosakae), No common name (Lipochaeta venosa)	2	211	Evaluate impact of removing alien plants	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, U.S. Geological Survey, Biological Resources Division	Research: Competition, Research: Habitat Status, Research: Management Techniques	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	
Aupaka (Isodendron hosakae), No common name (Lipochaeta venosa)	2	212	Devise methods for alien plant control.	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, U.S. Geological Survey, Biological Resources Division	Management: Habitat Maintenance and Manipulation, Management: Predator and Competitor Control	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Volunteer	Numerous studies on the control of various alien plants have been or are being conducted by the Invasive Species Committees and land managers on each island, and the results of these studies are being used to determine the best method of weed control for alien plant pests found in Isodendron and Lipochaeta habitat.

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No common name (Lipochaeta venosa)	2	221	Research reproductive biology and cultivation of L. venosa.	Ongoing Not Current	FY 2011		U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, U.S. Geological Survey, Biological Resources Division	Research: Demographic Studies, Research: Propagation	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert	This species is in cultivation, but full genetic representation has not been achieved.
Aupaka (Isodendrion hosakae), No common name (Lipochaeta venosa)	2	23	Determine habitat requirements of both species	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, U.S. Geological Survey, Biological Resources Division	Research: Habitat Requirements	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert	
Aupaka (Isodendrion hosakae), No common name (Lipochaeta venosa)	2	24	Investigate pollinators of each species	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, U.S. Geological Survey, Biological Resources Division	Research: Other Information	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert	
Aupaka (Isodendrion hosakae), No common name (Lipochaeta venosa)	2	31	Propagate genetically suitable plants.	Ongoing Not Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources	Management: Propagation, Management: Reintroduction	Contract, Graduate Student, Internal Technical Assistance, Volunteer	
Aupaka (Isodendrion hosakae), No common name (Lipochaeta venosa)	2	321	Expand subpopulation at Site #1	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources	Management: Reintroduction	Contract, Graduate Student, Internal Field Assistance, Species Expert, Volunteer	
Aupaka (Isodendrion hosakae), No common name (Lipochaeta venosa)	2	322	Expand subpopulation at Site #2	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources	Management: Reintroduction	Contract, Graduate Student, Internal Field Assistance, Species Expert, Volunteer	

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Aupaka (Isodendron hosakae), No common name (Lipochaeta venosa)	2	323	Establish L. venosa and expand I. hosakae populations at Site #3	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources	Management: Reintroduction	Contract, Graduate Student, Internal Field Assistance, Species Expert, Volunteer	
Aupaka (Isodendron hosakae), No common name (Lipochaeta venosa)	2	324	Establish I. hosakae and expand L. venosa populations at Site #4	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources	Management: Reintroduction	Contract, Graduate Student, Internal Field Assistance, Species Expert, Volunteer	
Aupaka (Isodendron hosakae), No common name (Lipochaeta venosa)	2	325	Establish I. hosakae and expand L. venosa populations at Site #5	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources	Management: Reintroduction	Contract, Graduate Student, Internal Field Assistance, Species Expert, Volunteer	
Aupaka (Isodendron hosakae), No common name (Lipochaeta venosa)	2	326	Establish I. hosakae and expand L. venosa populations at Site #6	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources	Management: Reintroduction	Contract, Graduate Student, Internal Field Assistance, Species Expert, Volunteer	
No common name (Lipochaeta venosa)	2	327	Expand subpopulation at site #7	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources	Management: Reintroduction	Contract, Graduate Student, Internal Field Assistance, Species Expert, Volunteer	
Aupaka (Isodendron hosakae), No common name (Lipochaeta venosa)	3	41	Conduct demographic and life history studies of populations.	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources, U.S. Geological Survey, Biological Resources Division	Research: Demographic Studies	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	

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Aupaka (Isodendron hosakae), No common name (Lipochaeta venosa)	3	42	Determine number of subpopulations needed for long-term survival	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources	Other: Administration, Research: Competition, Research: Demographic Studies, Research: Genetics, Research: Habitat Requirements, Research: Habitat Status, Research: Management Techniques, Research: Population Surveys, Research: Predation	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert	
Aupaka (Isodendron hosakae), No common name (Lipochaeta venosa)	3	43	Determine number of individuals needed for long-term survival	Not Started			U.S. Fish and Wildlife Service, Ecological Services Division, Hawaii Department of Land and Natural Resources	Other: Regulations, Research: Competition, Research: Demographic Studies, Research: Genetics, Research: Habitat Requirements, Research: Habitat Status, Research: Management Techniques, Research: Population Surveys, Research: Predation	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert	